

REMARKS

Reconsideration and allowance are respectfully requested.

Claims 14 and 15 stand rejected under 35 U.S.C. §101. Claim 14 is amended along the lines recommended by the Examiner and claim 15 is canceled. The rejection is thereby overcome.

The primary prior art rejection under 35 U.S.C. §103 is based on Komatsu and Isaksson. This rejection is respectfully traversed.

The Examiner considers all features of pending independent claims 1 and 16 as being known from the Komatsu reference, except for the feature that the code is evaluated on the basis of the sequence of compensated code symbols exploiting the orthogonality to the further codes. The Examiner argues that the abstract and column 2, lines 28-32 of Isaksson disclose this missing claim feature. He also states that the idea of having orthogonality between carriers and codes is a well-known idea to avoid interference, citing to Isaksson, which the Examiner believes motivates the modification of Komatsu's teachings in order to avoid or minimize interference.

Independent claims 1 and 16 recite that: (i) a signal carries a code containing a sequence of code symbols, (ii) for a code symbol at a particular symbol instant, at least one channel estimate is determined, (iii) for the code symbol, a compensation value is determined taking into account the at least one channel estimate, and (iv) each code symbol is compensated using the compensation value determined for the corresponding symbol instant. Consequently, each code symbol is compensated using the compensation value for the corresponding symbol instant, and the compensation value is determined based on the channel estimate which has been determined for the code symbol at the particular symbol instant. In other words, channel estimates for code symbols of a code are determined, and each code symbol of the code is compensated based on

the channel estimates determined for the corresponding symbol instant to restore the original power relationship among the code symbols.

Komatsu estimates and compensates for the fading distortion using pilot symbols which are inserted between information symbols with a constant period (col. 1, lines 19 to 23). The decoder includes a memory for storing pilot blocks, a pilot symbol averaging unit for averaging a plurality of received channels per pilot block, a weight determination unit for determining weights for transmission channel estimation values per pilot block, a multi-pilot block channel estimation unit for obtaining transmission channel estimation values for information symbols in each slot, and a transmission channel fluctuation compensation unit for compensating the fluctuation of the information symbols (col. 2, line 58 to col. 3, line 1).

So Komatsu teaches using a code, which the Examiner maps to Komatsu's known pilot symbols, to obtain channel estimation values. But in contrast to what is claimed, those channel estimates are not then used to compensate the "code" itself, i.e., the pilot symbols themselves are not compensated. Instead, the channel estimates compensate the information symbols in the slot following the pilot symbols (see col. 2, line 58 to col. 3, line 1 and col. 3, lines 10-27).

Thus, the Komatsu reference teaches something quite different from what is claimed. Rather than the channel estimation values determined from the code (pilot symbols) compensating the pilot symbols themselves, each channel estimation value is obtained at a first symbol instant (pilot symbol) and used to correct another symbol (information symbol) at another symbol instant. In addition, Komatsu does not describe that the purpose of the compensation is to restore an original power relationship among the code symbols, i.e., among the pilot symbols. So Komatsu is missing multiple features recited in claims 1 and 16.

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Isaksson discloses estimating the phase of a pilot carrier, which exploits the orthogonality of carriers to avoid the influence of neighboring carriers on the pilot carrier. But this teaching does not remedy the deficiencies noted above with Komatsu. Thus, even if the teachings of the Isaksson reference could be used to modify Komatsu as proposed, the proposed combination would still not disclose or suggest the symbol-instant-based compensation technique claimed.

The application is in condition for allowance. An early notice to that effect is requested.

Respectfully submitted,

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